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Halifax Co.

North Carolina Cooperative Extension Service

NORTH CAROLINA STATE UNIVERSITY
COLLEGE OF AGRICULTURE & LIFE SCIENCES

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August 21, 1995

Mr. Ted Lyon
NCDEHNR- DSW
Box 27687
Raleigh, NC 27611

Dear Mr. Lyon:

Thank you for visiting the Caledonia Facility with me to discuss potential for composting the food wastes generated there. The Facility Superintendent, Mr. Randy Lee, appeared genuinely interested in this project.

Attached please find a request to conduct this demonstration of composting at the prison facility.

If I may be of additional help, please contact me.

Sincerely,

A. R. Rubin, Extension Specialist
and Associate Professor
Biological and Agricultural Engineering

Compost

Southern Testing & Research Laboratories, Inc.

3809 Airport Drive (919) 237-4175 • Fax: (919) 237-9341 Wilson, NC 27896

REPORT OF ANALYSIS

LAB SAMPLE NO.(s): 9377D1-2

DATE OF REPORT: 95/07/06

RECEIVED FROM

DATE RECEIVED : 95/06/15

NAM : GREG WALKER
ORG : NC DEPT OF CORRECTION
ADD : P.O. BOX 67
CSZ : TILLERY, NC 27887

ACCOUNT NO.:

TELEPHONE :

SAMPLE(s) of:

MARKED A: SAWDUST B: WHEAT STRAW

C: D:

-----SAMPLE/TEST NO.-------->		A: 9377D1	B: 9377D2	C:	D:
ANALYSIS	UNITS				
CARBON-NITROGEN RATIO					
CARBON	(%)	49.7	41.6		
NITROGEN	(%)	1.04	1.91		

COMMENTS:

LAB USE ONLY----------
ANALYSTs: CH
PICKUP: N RUSH: N
ME: MILES:
T: D:

Reviewed and Approved

Name: Thomas A. Dean, Jr., Ph.D.
Title: Director, Research & Dev.

TO:
Caledonia Farm D. O. C.
Hwy. 561 West, P.O. Bx 67
Tillery NC 27887

COPIES:
HALIFAX CO. EXT. DIR.
Charlie Tyson
Soil Conservation Service

WASTE ANALYSIS REPORT

PLANT WASTE SOLUTION

ADVISORY SECTION

North Carolina Department of Agriculture

Agronomic Division

6/20/95

REPORT NO: W01035 COUNTY: HALIFAX

SAMPLE INFORMATION			LABORATORY RESULTS																			
SAMPLE ID	DESCRIPTION	WASTE CODE	DM - %	N - %	P - %	K - %	Ca - %	Mg - %	S - %	Fe-PPM	Mn-PPM	Zn-PPM	Cu-PPM	B-PPM	Mo-PPM	Na - %	Cl - %	Ni-PPM	Cd-PPM	Pb-PPM		SS
F	Other, Farm	70	25.47	4.70	0.46	0.41	0.79	0.08	0.37	171	15.6	45.6	7.7	3.15		0.59		0.00	0.00	0.00		830mhos x 10⁻⁵/cm

NUTRIENTS AVAILABLE FOR FIRST CROP (lbs/Ton)													OTHER ELEMENTS						
APPLICATION METHOD	NITROGEN	P_2O_5	K_2O	CALCIUM	MAGNESIUM	SULFUR	Fe	Mn	Zn	Cu	B	Mo	Na	Cl	Ni	Cd	Pb		
BROADCAST	9.58	3.22	1.50	2.42	0.25	1.13	0.05	0.01	0.01	0.00	0.00		1.80		0.00	0.00	0.00		
SOIL INCORP.	11.97	4.02	1.88	3.02	0.31	1.41	0.07	0.01	0.02	0.00	0.00		2.25		0.00	0.00	0.00		

SAMPLE INFORMATION			LABORATORY RESULTS																			
SAMPLE ID	DESCRIPTION	WASTE CODE	DM - %	N - %	P - %	K - %	Ca - %	Mg - %	S - %	Fe-PPM	Mn-PPM	Zn-PPM	Cu-PPM	B-PPM	Mo-PPM	Na - %	Cl - %	Ni-PPM	Cd-PPM	Pb-PPM		

NUTRIENTS AVAILABLE FOR FIRST CROP													OTHER ELEMENTS						
APPLICATION METHOD	NITROGEN	P_2O_5	K_2O	CALCIUM	MAGNESIUM	SULFUR	Fe	Mn	Zn	Cu	B	Mo	Na	Cl	Ni	Cd	Pb		

NUTRIENTS AVAILABLE FOR FIRST CROP													OTHER ELEMENTS						
APPLICATION METHOD	NITROGEN	P_2O_5	K_2O	CALCIUM	MAGNESIUM	SULFUR	Fe	Mn	Zn	Cu	B	Mo	Na	Cl	Ni	Cd	Pb		

SAMPLE INFORMATION			LABORATORY RESULTS																			
SAMPLE ID	DESCRIPTION	WASTE CODE	DM - %	N - %	P - %	K - %	Ca - %	Mg - %	S - %	Fe-PPM	Mn-PPM	Zn-PPM	Cu-PPM	B-PPM	Mo-PPM	Na - %	Cl - %	Ni-PPM	Cd-PPM	Pb-PPM		

NUTRIENTS AVAILABLE FOR FIRST CROP													OTHER ELEMENTS						
APPLICATION METHOD	NITROGEN	P_2O_5	K_2O	CALCIUM	MAGNESIUM	SULFUR	Fe	Mn	Zn	Cu	B	Mo	Na	Cl	Ni	Cd	Pb		

NUTRIENTS AVAILABLE FOR FIRST CROP													OTHER ELEMENTS						
APPLICATION METHOD	NITROGEN	P_2O_5	K_2O	CALCIUM	MAGNESIUM	SULFUR	Fe	Mn	Zn	Cu	B	Mo	Na	Cl	Ni	Cd	Pb		

ELEMENTAL CONCENTRATIONS
Solids - Dry Weight Basis
Liquids - Volume Basis
N-% = Nitrogen
P-% = Phosphorus
K-% = Potassium
Ca-% = Calcium
Mg-% = Magnesium
S-% = Sulfur
Cl-% = Chlorine
Na-% = Sodium
Fe-ppm = Iron
Mn-ppm = Manganese
Zn-ppm = Zinc
Cu-ppm = Copper
B-ppm = Boron
Mo-ppm = Molybdenum
Ni-ppm = Nickel
Cd-ppm = Cadmium
Pb-ppm = Lead

DM - %
Percent Dry Matter (Solids)

NUTRIENT AVAILABILITY
Nutrient availability cannot be determined with 100% accuracy. Many variables influence mineralization rate and nutrient loss. This report provides a realistic estimation of nutrient availability based on type of waste and application method.

C. Ray Campbell
AGRONOMIST

COMMENTS:

Nitrogen is in highest concentration in the sample. The material could be applied at rates needed to supply this nutrient for crop production. Soluble salts are fairly high so the material should be incorporated where applied.

We did not find measurable concentrations of the heavy metals Ni, Cd, and Pb in the sample.

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

May 16, 1995

Mr. Richard Parnell
City of Roanoke Rapids
P.O. Box 38
Roanoke Rapids, NC 27870

Ref: Composting Notification/Leaf Mulch Site
First & Jefferson Sts.

Mr. Parnell:

The Solid Waste Section has received your yard waste facility notification form. As long as your facility only processes and stores less than 6,000 cubic yards of the following materials on a quarterly basis, you can continue to operate by notifying the Section on an annual basis. If your composting activities grow in size to more than 6,000 cubic yards quarterly, please contact the Solid Waste Section for assistance in obtaining a permit.

Facilities operating under notification are permitted to receive:

a. "Agriculture Waste" as defined in 15A NCAC 13B .0101(54); waste materials produced from the raising of plants and animals, including animal manures, bedding, plant stalks, hulls, and vegetable matter.

b. "Silvaculture Waste" as defined in 15A NCAC 13B .0101(62); waste materials produced from the care and cultivation of forest trees, including bark and woodchips.

c. "Yard Waste" as defined in 15A NCAC 13B .0101(65); yard trash and land clearing debris to include stumps, limbs, leaves, grass, and untreated wood.

If you have any questions or if we can be of any other assistance, please do not hesitate to contact the Regional Waste Management Specialist, Mr. Ben Barnes at (919) 571-4700.

Thank you,

Dexter R. Matthews, Section Chief
Soild Waste Section

copy: Ben Barnes
Terry Dover